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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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39/142,484

09/19/98

LEHMAN

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10/1/98

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EXAMINER
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BR/010

INVENTOR'S SIGNATURE

DE LOUX 188.6

ALEXANDRIA VA 22304

ART UNIT	PAPER NUMBER
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2874

DATE MAILED:

01/01/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

*SEE ATTACHMENT.*



UNITED STATES DEPARTMENT OF COMMERCE  
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EXAMINER
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DATE MAILED:

This is a communication from the examiner in charge of your application  
COMMISSIONER OF PATENTS AND TRADEMARKS

### OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 2-17-00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

- ☒ Claim(s) 1-26 is/are pending in the application.  
Of the above, claim(s) 8-13 and 21-26 is/are withdrawn from consideration.  
☐ Claim(s) \_\_\_\_\_ is/are allowed.  
☒ Claim(s) 1-7 and 14-20 is/are rejected.  
☐ Claim(s) \_\_\_\_\_ is/are objected to.  
☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.  
☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.  
☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.  
☐ The specification is objected to by the Examiner.  
☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).  
☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.  
☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_  
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

- ☒ Notice of Reference Cited, PTO-892  
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) \_\_\_\_\_  
☐ Interview Summary, PTO-413  
☒ Notice of Draftsperson's Patent Drawing Review, PTO-948  
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

Art Unit: 2834

Claims 4-6 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are vague and indefinite in that it is unclear whether or not a fixing layer is included in the completed finished device claimed. It is unclear whether applicant is attempting to claim an intermediate product, separate from the finished structure of e.g. claims 1 and 14. Thus one cannot determine the metes and bounds of these claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 4-7, 14, 15 and 17-20 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Ogiso (fig. 16), Nakata (fig. 9), Japan (077) (fig. 2) or Japan (821)(figs. 4, 5)..

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogiso or Japan (821) in view of Japan (409). Ogiso (fig. 16) and Japan (821) (figs. 4 & 5) teach the

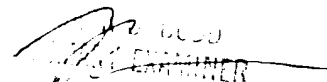
Art Unit: 2834

claimed resonator structure except for the exact tapered cross-section for the connection portion. Japan (409) teaches providing a tapered shape to aid in assembly and allow for different piezoelectric sizes. Thus, for at least these reasons it would have been obvious to one of ordinary skill in the art to provide Ogiso or Japan (821) with a tapered connection section.

Further cited of interest are Scott, Pennybacker, Ishigami, Kreutzev and German.

Applicants general traversal of the lack of unity "holding is noted. It is noted hower that the method steps do not recite special technical relationship in that the U-shape opening is explicitly included in the resonator structure. In the method, the only a steps recited are attaching, providing a gap and forming a connecting layer.

Budd/dc  
February 25, 2000

  
EXAMINER  
UNIT 212